

CompTIA® Cybersecurity Analyst+ (Exam CS0-001)

Course Specifications

Course Number:

093028

Course Length:

5 days

Course Description

Overview:

This course covers the duties of cybersecurity analysts who are responsible for monitoring and detecting security incidents in information systems and networks, and for executing a proper response to such incidents. Depending on the size of the organization, this individual may act alone or may be a member of a cybersecurity incident response team (CSIRT). The course introduces tools and tactics to manage cybersecurity risks, identify various types of common threats, evaluate the organization's security, collect and analyze cybersecurity intelligence, and handle incidents as they occur. Ultimately, the course promotes a comprehensive approach to security aimed toward those on the front lines of defense.

This course is designed to assist students in preparing for the *CompTIA® Cybersecurity Analyst+ (Exam CS0-001)* certification examination. What you learn and practice in this course can be a significant part of your preparation.

In addition, this course can help students who are looking to fulfill DoD directive 8570.01 for information assurance (IA) training. This program is designed for personnel performing IA functions, establishing IA policies, and implementing security measures and procedures for the Department of Defense and affiliated information systems and networks.

Course Objectives:

In this course, you will assess and respond to security threats and operate a systems and network security analysis platform.

You will:

- Assess information security risk in computing and network environments.
- Analyze reconnaissance threats to computing and network environments.
- Analyze attacks on computing and network environments.
- Analyze post-attack techniques on computing and network environments.
- Implement a vulnerability management program.

- Collect cybersecurity intelligence.
- Analyze data collected from security and event logs.
- Perform active analysis on assets and networks.
- Respond to cybersecurity incidents.
- Investigate cybersecurity incidents.
- Address security issues with the organization's technology architecture.

Target Student:

This course is designed primarily for cybersecurity practitioners who perform job functions related to protecting information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This course focuses on the knowledge, ability, and skills necessary to provide for the defense of those information systems in a cybersecurity context, including protection, detection, analysis, investigation, and response processes. In addition, the course ensures that all members of an IT team—everyone from help desk staff to the Chief Information Officer—understand their role in these security processes.

Prerequisites:

To ensure your success in this course, you should meet the following requirements:

- At least two years (recommended) of experience in computer network security technology or a related field.
- The ability to recognize information security vulnerabilities and threats in the context of risk management.
- Foundation-level operational skills with some of the common operating systems for computing environments.
- Foundational knowledge of the concepts and operational framework of common assurance safeguards in computing environments. Safeguards include, but are not limited to, basic authentication and authorization, resource permissions, and anti-malware mechanisms.
- Foundation-level understanding of some of the common concepts for network environments, such as routing and switching.
- Foundational knowledge of major TCP/IP networking protocols, including, but not limited to, TCP, IP, UDP, DNS, HTTP, ARP, ICMP, and DHCP.
- Foundational knowledge of the concepts and operational framework of common assurance safeguards in network environments. Safeguards include, but are not limited to, firewalls, intrusion prevention systems, and VPNs.

You can obtain this level of skills and knowledge by passing the relevant exams:

- *CompTIA® A+®: A Comprehensive Approach (Exams 220-901 and 220-902)*
- *CompTIA® Network+® (Exam N10-006)*
- *CompTIA® Security+® (Exam SY0-401)*

Course Content

Lesson 1: Assessing Information Security Risk

Topic A: Identify the Importance of Risk Management

Topic B: Assess Risk

Topic C: Mitigate Risk

Topic D: Integrate Documentation into Risk Management

Lesson 2: Analyzing Reconnaissance Threats to Computing and Network Environments

Topic A: Assess the Impact of Reconnaissance Incidents

Topic B: Assess the Impact of Social Engineering

Lesson 3: Analyzing Attacks on Computing and Network Environments

Topic A: Assess the Impact of System Hacking Attacks

Topic B: Assess the Impact of Web-Based Attacks

Topic C: Assess the Impact of Malware

Topic D: Assess the Impact of Hijacking and Impersonation Attacks

Topic E: Assess the Impact of DoS Incidents

Topic F: Assess the Impact of Threats to Mobile Security

Topic G: Assess the Impact of Threats to Cloud Security

Lesson 4: Analyzing Post-Attack Techniques

Topic A: Assess Command and Control Techniques

Topic B: Assess Persistence Techniques

Topic C: Assess Lateral Movement and Pivoting Techniques

Topic D: Assess Data Exfiltration Techniques

Topic E: Assess Anti-Forensics Techniques

Lesson 5: Managing Vulnerabilities in the Organization

Topic A: Implement a Vulnerability Management Plan

Topic B: Assess Common Vulnerabilities

Topic C: Conduct Vulnerability Scans

Topic D: Conduct Penetration Tests on Network Assets

Lesson 6: Collecting Cybersecurity Intelligence

Topic A: Deploy a Security Intelligence Collection and Analysis Platform

Topic B: Collect Data from Network-Based Intelligence Sources

Topic C: Collect Data from Host-Based Intelligence Sources

Lesson 7: Analyzing Log Data

Topic A: Use Common Tools to Analyze Logs

Topic B: Use SIEM Tools for Analysis

Lesson 8: Performing Active Asset and Network Analysis

Topic A: Analyze Incidents with Windows-Based Tools

Topic B: Analyze Incidents with Linux-Based Tools

Topic C: Analyze Malware

Topic D: Analyze Indicators of Compromise

Lesson 9: Responding to Cybersecurity Incidents

Topic A: Deploy an Incident Handling and Response Architecture

Topic B: Mitigate Incidents

Topic C: Prepare for Forensic Investigation as a CSIRT

Lesson 10: Investigating Cybersecurity Incidents

Topic A: Apply a Forensic Investigation Plan

Topic B: Securely Collect and Analyze Electronic Evidence

Topic C: Follow Up on the Results of an Investigation

Lesson 11: Addressing Security Architecture Issues

Topic A: Remediate Identity and Access Management Issues

Topic B: Implement Security During the SDLC